





**ENTERPRISE-LEVEL CONCEPTUAL
ARCHITECTURES AND MIGRATION PLANS
FOR INFORMATION MANAGEMENT
WITHIN THE FEDERAL GOVERNMENT**

Presentation to FAIAWG
March 26, 1998


Steven H. Spewak, PhD
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Biography

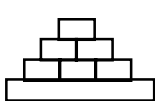


Dr. Spewak has more than twenty-five years of corporate management and consulting experience in the field of information systems and technology, and has been an invited speaker at more than 50 international conferences and seminars. Most of his time is assisting clients in a broad range of industries with enterprise modeling, business strategy planning, process improvement, data warehouse and decision support system design, data administration standards, object-oriented and information engineering methodologies, and project management. Dr. Spewak is the author of *Enterprise Architecture Planning: Developing a Blueprint for Data, Applications, and Technology* which has sold more than 16,000 copies since its publication by John Wiley & Sons in 1993, and he is writing second edition of the book that will include examples and experience from recent EAP engagements. He was Consulting Editor for the *Data Resource Management* journal and the *Data Base Management* information series published by Auerbach. His public seminar, *Managing Enterprise Architecture Planning*, has been offered by Digital Consulting (DCI) for twelve years (their longest running seminar!). Dr. Spewak can be contacted through the www.EAP.com website or directly at SSpewak@EAP.com

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Presentation Agenda/Summary

- ① **Introduction To Enterprise Architecture**
 - Say What? Are you serious? No way!!
 - The Zachman Framework and Enterprise Architecture Planning (EAP)
 - Explicit Alignment of Business Plans and Information Plans (Walk the Talk)
 - You can't judge an architecture by its cover
- ② **The Governing IM Principles for Government (Of, By, and For the People)**
 - Declaration of IM Independence -- Achievement, Freedom, Pursuit of Knowledge
 - Forms of Governance for IM
 - Sample Principles: Do You *REALLY WANT* To Be Successful?
- ③ **Consistent Architecture Templates**
 - Architectures Models form a Common Language of Government
- ④ **Lessons Learned Through the Years**
 - Most Common Reasons for Failure
 - 10 Success Factors
 - Are You Ready to Get Set and Go Forth



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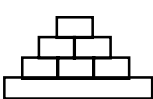
An Information Management (IM) Environment With Good Quality Conceptual-Level Enterprise Architectures

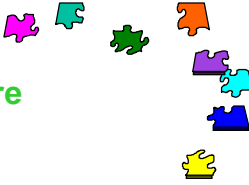
- Will have succeeded whereas the vast majority did not
- Is not in the business of "satisfying user requirements"
- Cost is not a separate consideration when making decisions
- The big-bang-for-the-buck applications are closer to the end of the migration plan than the beginning
- When presenting a multi-year multi-million/billion dollar plan to the ultimate decision maker(s), its acceptance/approval is rarely in doubt
- The "Enterprise" doesn't change much over time
- Budgeting and accounting policies & procedures, managerial responsibilities and authorities, and levels of funding will change over time
- Business process improvement/re-engineering coexists with Enterprise Architecture Planning, may be conducted at the same time, even by the same team of people



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
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① Introduction To Enterprise Architecture

Goals and Objectives (What's Wanted?)

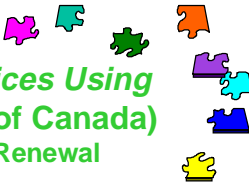


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
Blueprint for Renewing Government Services Using Information Technology (Treasury Board of Canada)

The Vision for Technology-Enabled Business Renewal

THE VISION


Government services that are
affordable, accessible, and responsive

- ☞ Direct Service to Clients
- ☞ Transparent and Seamless Service
- ☞ Value-Added Service
- ☞ Continuous Learning
- ☞ Standardized, Interconnected Tools
- ☞ Shared Solutions
- ☞ Shared Information
- ☞ Paperless Environment

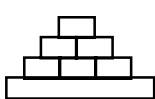


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1

Introduction To Enterprise Architecture


50 Years Without Consistent Success -- Why?

X

Doing Things Wrong


✓

Doing the Wrong Things



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1

Introduction To Enterprise Architecture

"What we have here is a failure to communicate!"

Studies have shown that the level of comprehensibility in conversation can be as low as 50%


What systems do you want?

Well, how much do you want to spend?

I don't know. What can I get?


What are your critical success factors?

Lots more stuff!!

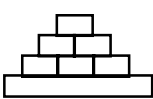


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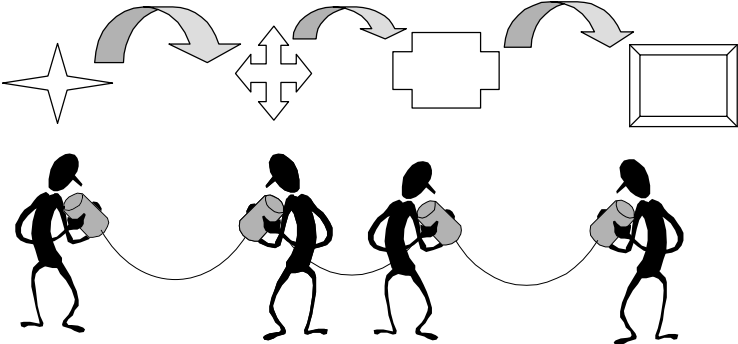


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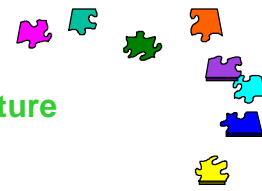



1 Introduction To Enterprise Architecture


"Let's play a game called telephone!"

A diagram illustrating the telephone game. Four stick figures are shown in a line, each holding a telephone receiver. Above them are four shapes: a star, a cross, a square, and a rectangle. Arrows indicate the flow of information from the star to the cross, then to the square, and finally to the rectangle. A large red arrow points from the telephone game towards the bottom right corner of the slide.

Let's now look at the system development process!"

A collection of colorful puzzle pieces arranged in a semi-circle at the top right of the slide.

A small collection of colorful puzzle pieces at the bottom right of the slide.

A logo consisting of a stack of four squares.

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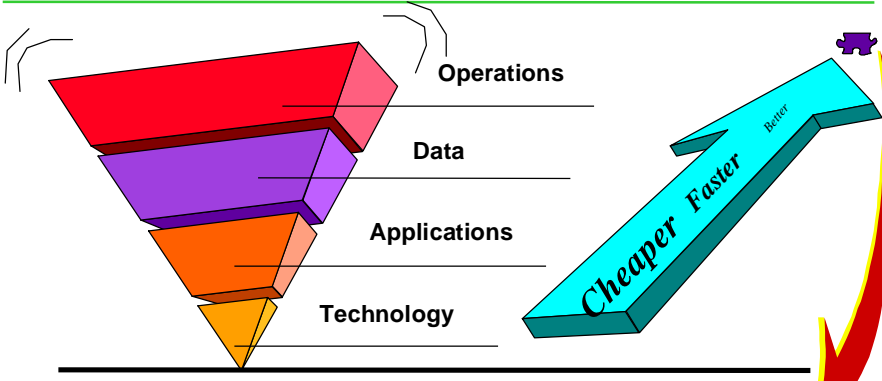
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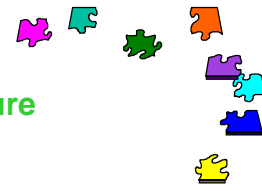
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
1 Introduction To Enterprise Architecture

The Typical Approach for IM Planning Decisions

A diagram illustrating the typical approach for IM planning decisions. It features a funnel shape divided into four horizontal layers, labeled from top to bottom: Operations (red), Data (purple), Applications (orange), and Technology (yellow). To the right of the funnel is a large blue arrow pointing upwards, labeled "Cheaper Faster Better". A large red arrow points from the bottom right of the slide towards the bottom right corner.

A collection of colorful puzzle pieces arranged in a semi-circle at the top right of the slide.

A small collection of colorful puzzle pieces at the bottom right of the slide.

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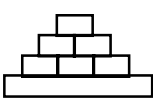
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1 Introduction To Enterprise Architecture

No surprises, and no magic! Must have a different form of “IM government”, and an unwavering resolve to make it happen!

If we keep building what we’ve been building ...

... we’re going to get what we’ve already got! Oh well, that’s Politics!

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1 Introduction To Enterprise Architecture

(Lack of) Architecture Example: *The Winchester House*

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Slide - 12

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1 Introduction To Enterprise Architecture

Who's Doing the Right Things the Right Way?



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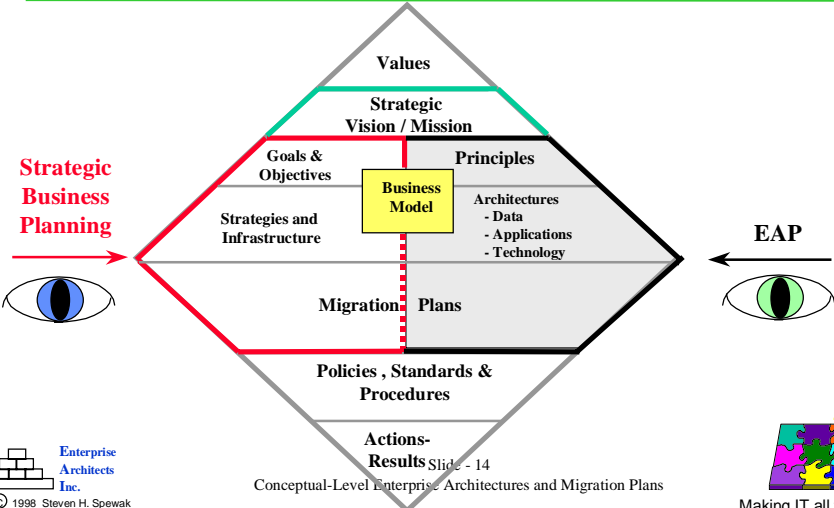
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1 Introduction To Enterprise Architecture

Values to Results - Explicit Measurable Alignment of Plans



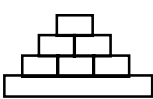
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① Introduction To Enterprise Architecture

Mission of the IM Function

To provide quality information and technology to support business decisions and operations for the enterprise, customers, and business partners.

Quality in the statement above means:

- Information is available and rapidly accessible when requested
- Flexible maintainable systems that are readily adaptable to business changes
- Accurate and consistent data across the enterprise (integrity)
- Secure and protected information and technology resources
- Data and technology is shared across the enterprise and facilitates business communications (integration)
- All of the above accomplished in a cost-effective manner providing value to the business

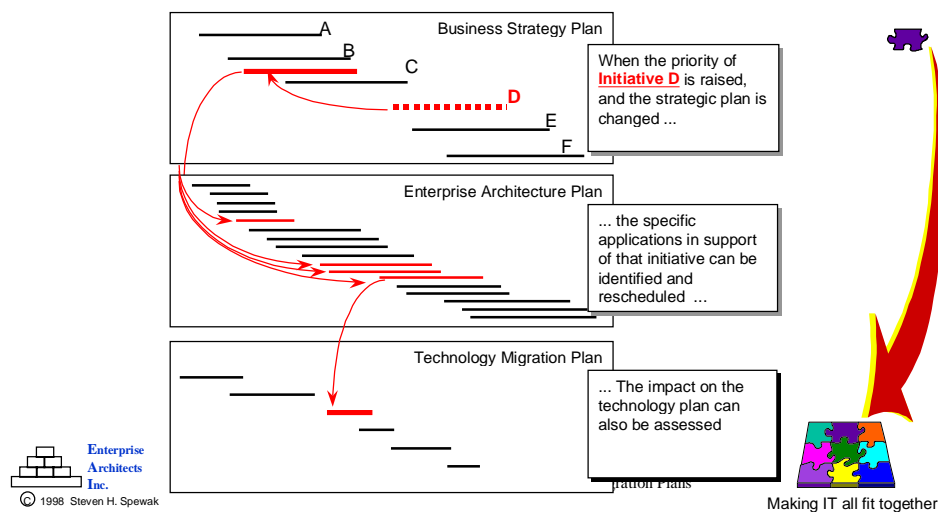


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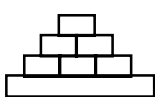
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Alignment of Business and IT Plans

Explicit linkage and measures assure balance and value

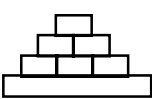
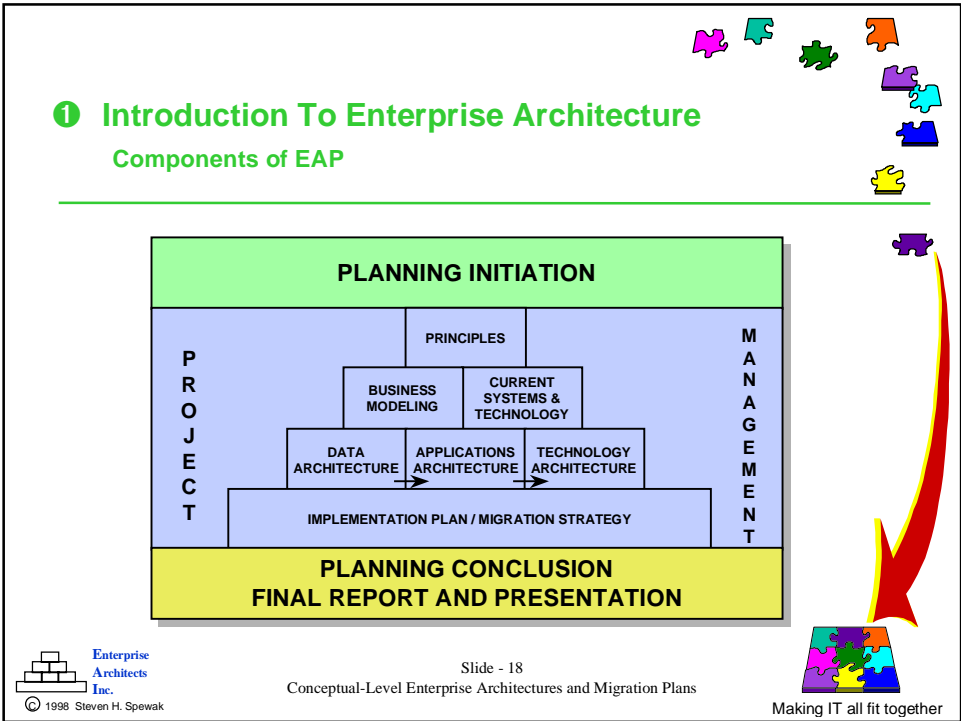
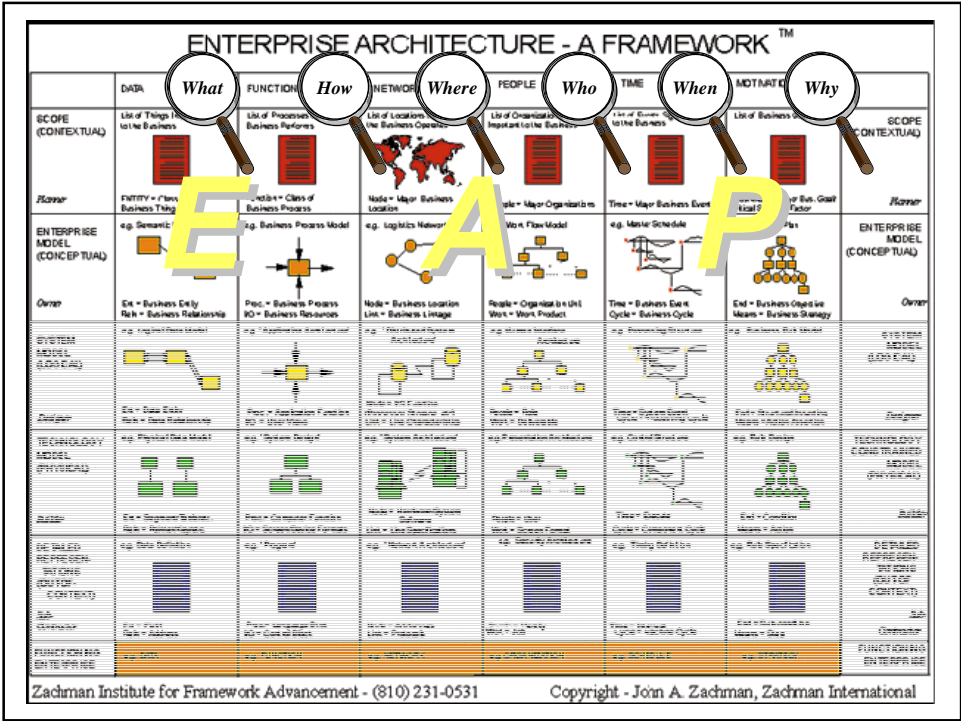


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

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① Introduction To Enterprise Architecture

Fundamental Differences Compared to Conventional Planning

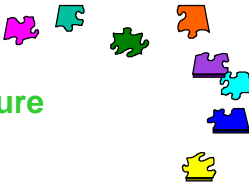
- Prime Directive
- Criteria for Making Decisions
- Decision Making Procedure
- Timing of Acceptance Decision
- Team Composition
- Sources of Information
- Planning Procedure
- View of the Business
- View of Systems
- Organization Units that Benefit
- Structure of Systems Architecture
- Sequencing the Criteria for Setting Priorities
- Cost Justification
- System Structure
- Weights for Criteria
- Form of Governance
- Outlook (Planning Horizon)



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




① Introduction To Enterprise Architecture

Procedural Details are in the "Blue Book"

3 MORE TOPICS:

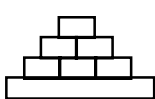
- ② Governing Principles
- ③ Consistent Templates
- ④ Lessons Learned



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
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② Governing Principles for Information Management


Role of Principles (Metaphorically)

GOVERNING THE U.S.	MANAGING INFORMATION AND TECHNOLOGY
Declaration of Independence and the Preamble	Values
Bill of Rights	Principles
Constitution	Architectures
Statutes, Laws, Regulations, Code	Policies, Standards, and Procedures
Federal, State, and Local Levels	Corporate, Divisional, Departmental



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② Governing Principles for Information Management

Signed and Ratified



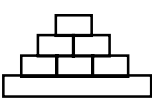


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② Governing Principles for Information Management

Sample Names for Principles

Architectural Direction Principles

- Maximum Enterprise Benefit over Time
- Business Continuity
- Balanced Authority & Representation
- Data Integrity & Accountability (Asset)
- Consistency in Local Community
- Common Languages and Protocols
- Distribution of Processing (Work)
- Conformance with Industry, Economy, and Governments
- Business Unit Self Direction

Architectural Development Principles

- Enterprise Architecture Framework (Zachman) (Row & Column Distinction)
- Standard Components (Mass Production and Reuse)
- Consistent External & Internal Interaction
- Separation of Transactional and Analytical Activity, Operation and Knowledge
- Ease of Operation

Architectural Operational Principles

- Quality Service (Measurements, Improvement)
- Change Management
- Security and Protection
- Compliance and Enforcement of Policies, Standards, and Procedures

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③ Consistent Architecture Templates

Simple fundamental definition of the “enterprise” concept

The diagram illustrates the enterprise concept. At the center is a purple box labeled "THE ENTERPRISE (Business)". Surrounding it are four main categories: "STAKEHOLDERS" at the top, "RESOURCES" at the bottom, "SUPPLIERS" on the left, and "CUSTOMERS" on the right. Arrows indicate the flow of materials, payments, products, and receipts between these entities and the central enterprise.

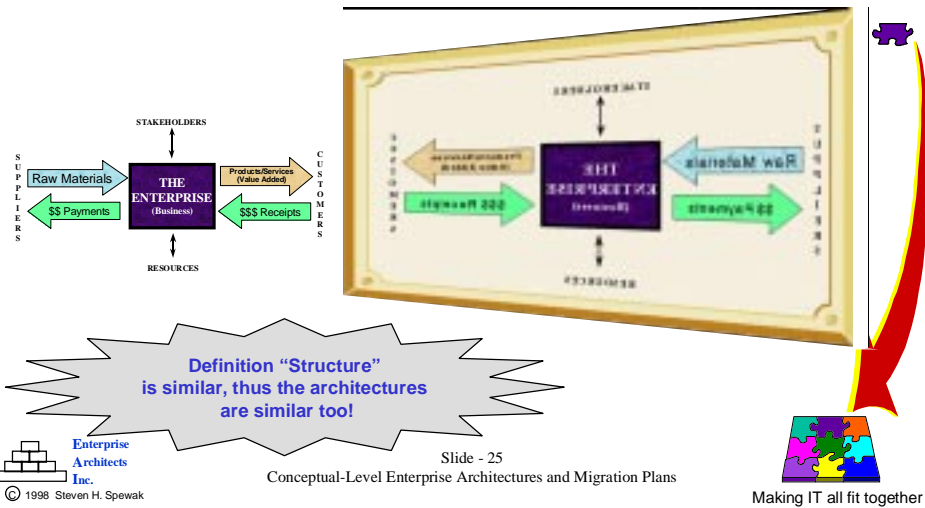
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③ Consistent Architecture Templates

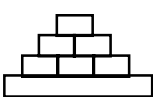
Inverse "Mirror" Enterprises - Commercial vs. Governmental



③ Consistent Architecture Templates

Principles and architectures are similar

- 70% - 80% similarity of principles
- 50% - 70% similarity of conceptual-level enterprise architecture definitions



④ Lessons Learned

First: (Literally!), most definitions of “ENTERPRISE” are poor

A good definition of “ENTERPRISE” . . .

- ☺ is synonymous with the word “business”
- ☺ includes all areas of the business that need to share substantial quantities of operational data (complete value chain and support functions); has well defined “borders”
- ☺ is not expected to change for the foreseeable future (vision)

A poor definition of “ENTERPRISE” . . .

- ☹ might refer to an organization unit (company, division, department)
- ☹ results in “scope creep” and unstable architectures (“war”)

An acceptable compromise for EAP:

- ① The business model defines the entire *business*, but detail is limited to specific functional areas of the enterprise
- ② The Principles and Technology Architecture are also for the entire enterprise, and then
- ③ The EAP team and the phases for the IRC, Data Arch, Applications Arch, and Migration Plan would be limited to specific *functional portions* of the business



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④ Lessons Learned

Second: Principles, Business Model, and Architectures are Poor

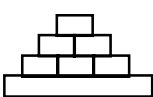
Criteria for good quality EAP deliverables

- Understandable
- Complete and Consistent
- Stable - Clear Separation of . . .
 - What (Definitions, Fundamental Concepts)
 - Who (People, Roles and Responsibilities, Org Structure)
 - hoW (Procedure, Sequence, Flow)
 - When (Timing)
 - Where (Business Sites)
 - Which Resources Used (Equipment/Facilities)
 - Why (Vision, Objectives, CSFs, Principles)



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④ Lessons Learned

Third: underestimating the commitment and challenge

- ✗ “EAP is so simple and easy, our staff can do it by themselves. We have the tools, we have the book, and we know what the deliverables looks like”
- ✗ “We’ll do it in our spare time -- a day here, a day there, some this year some next year, ...”
- ✗ “Every consulting company offers EAP” or
- ✗ “The consultants will produce *THE* architectures and plans, and then tell us what we should be doing”
- ✗ “Our IT environment will naturally evolve to the same outcome as EAP”
- ✗ “Everyone in the IT organization wants to do EAP and will embrace the outcome”
- ✗ “IT is a technical subject, so only technical people need to be involved”
- ✗ “Top management doesn’t understand EAP today, but they will accept the results when they can see them”



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④ Lessons Learned

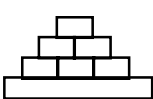
Fourth: participants are unprepared

- No formal academic, experience, intelligence, or personality requirements
- In order to “think out-of-the-box” one must be able to “see” the box
- Innovative creative thinking is like riding a bicycle uphill -- strenuous, and when you are learning, expect to fall until you “get it”
 - Not used to separating the Zachman dimensions
 - When defining the enterprise, avoid pronouns
- Distinguishing words (form) from the meaning (substance)
- Matching EAP steps to personality types on the team
- Blatant disregard for objectivity and quality



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④ Lessons Learned

Any of these red flags is a possible show-stopper

- ⌘ Awareness/Recognition/Acceptance by Top Management
- ⌘ Commitment of Resources to EAP (People, Funding, Time)
- ⌘ Unfavorable Corporate Culture
- ⌘ Political Challenges to Responsibilities
- ⌘ Inexperience and Lack of Training
- ⌘ Slipping back into conventional thinking (procedural, organizational)
- ⌘ Subjective data and decisions; No a priori quality or acceptance criteria
- ⌘ Lack of Credibility; Lack of Authority;
- ⌘ Unwilling to ratify a good set of principles
- ⌘ Resource Shortages; Backlog; Too Busy with Other Priorities
- ⌘ Finding the "Best" Methodology
- ⌘ Satisfaction with Current Situation
- ⌘ Inadequate or Expensive Tools
- ⌘ Cost Justification; Measuring Benefits
- ⌘ Feared Loss of Data Ownership/Control
- ⌘ Inaccessible or Uncooperative Users
- ⌘ Personnel Performance Evaluation Procedures

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④ Lessons Learned

The Ten Success Factors for EAP Projects

- ✓ Management Commitment and Resolve (Vision, Motivation)
- ✓ Business Participation on the Core Team
- ✓ Effective Project Leadership and Work Plan (Methodology)
- ✓ Balance of Scope/Objectives vs. Level of Detail vs. Quality of Architectures vs. Resources and Time Allocated;
- ✓ Qualified, Trained, **Empowered** Team
- ✓ Experienced Consulting and Facilitation
- ✓ Productive Toolset and Templates
- ✓ Distribution of Intermediate Deliverables
- ✓ Effective Presentations and Politics Management
- ✓ The 80 / 20 Rule

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